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ABSTRACT

Changes in the relationship between educational attainment and work-life earnings over the past 25 years were examined by using data from the Current Population Survey (CPS) to construct synthetic work-life earnings. CPS data collected in March 1998, 1999, and 2000 were analyzed by age, sex, full- or part-time work experience, race, Hispanic origin, and educational attainment groupings. The synthetic estimates were created by using the various study groups' 1-year annual earnings and summing age-specific average earnings for people aged 25-64 years. The resultant totals represent what individuals with the same educational level would expect to earn on average in 1999 dollars in a hypothetical 40-year working life. The following were among the key findings: (1) earnings increase with educational level, with average annual earnings ranging from $18,900 for high school dropouts to $25,900 for high school graduates, $45,400 for college graduates, and $99,300 for workers with professional degrees; (2) earnings differences by educational attainment compound over an individual's lifetime; (3) the educational gap between women and men is narrowing; and (4) educational attainment and work-life earnings vary by sex, race, and Hispanic origin. Detailed information about the study assumptions and limitations and the computational procedure are included. (Contains 10 tables/figures.) (MN)

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The Big Payoff: Educational Attainment and Synthetic Estimates of Work-Life Earnings

Issued July 2002

Special Studies

Does going to school pay off? Most people think so. Currently, almost 90 percent of young adults graduate from high school and about 60 percent of high school seniors continue on to college the following year. People decide to go to college for many reasons. One of the most compelling is the expectation of future economic success based on educational attainment.

This report illustrates the economic value of an education, that is, the added value of a high school diploma or college degree. It explores the relationship between educational attainment and earnings and demonstrates how the relationship has changed over the last 25 years. Additionally, it provides, by level of education, synthetic estimates of the average total earnings adults are likely to accumulate over the course of their working lives.

These synthetic estimates of work-life earnings, which are based on data from the Current Population Survey (CPS), are illustrative and do not predict actual future earnings. The synthetic work-life earnings are "expected average amounts" based on cross-sectional earnings data for the preceding calendar year by age, sex, full- or part-time work experience, race, Hispanic origin, and educational attainment groupings, as collected in the March 1998, 1999, and 2000 Current Population Surveys (CPS).[1] The synthetic work-life estimates are thus based on 1997-1999 earnings data and are shown in terms of "present value" (constant 1999 dollars).[2] These synthetic estimates are shown in detail in three tables at the end of this report.

"Synthetic" estimates of work-life earnings are created by using the working population's 1-year annual earnings and summing their age-specific average earnings for people ages 25 to 64 years. The resulting totals represent what individuals with the same educational level could expect to earn, on average, in today's dollars, during a hypothetical 40-year working life. A typical work-life is defined as the period from age 25 through age 64. While many people stop working at an age other than 65, or start before age 25, this range of 40 years provides a practical benchmark for many people.

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EDUCATION AND EARNINGS

We are more educated than ever.

In 2000, 84 percent of American adults ages 25 and over had at least completed

[1] This report refers to "work-life earnings" rather than "life-time earnings." The latter would account for the probability of life events, which might alter the average number of years people work, such as early death or accidents leading to disability.

[2] See the Methodology section of this report for a detailed explanation of the limitations of these estimates. The estimates in this report are based on responses from a sample of the population. As with all surveys, estimates may vary from the actual values for the entire population because of sampling variation, or other factors. All statements made in this report have undergone statistical testing and meet Census Bureau standards for statistical accuracy.

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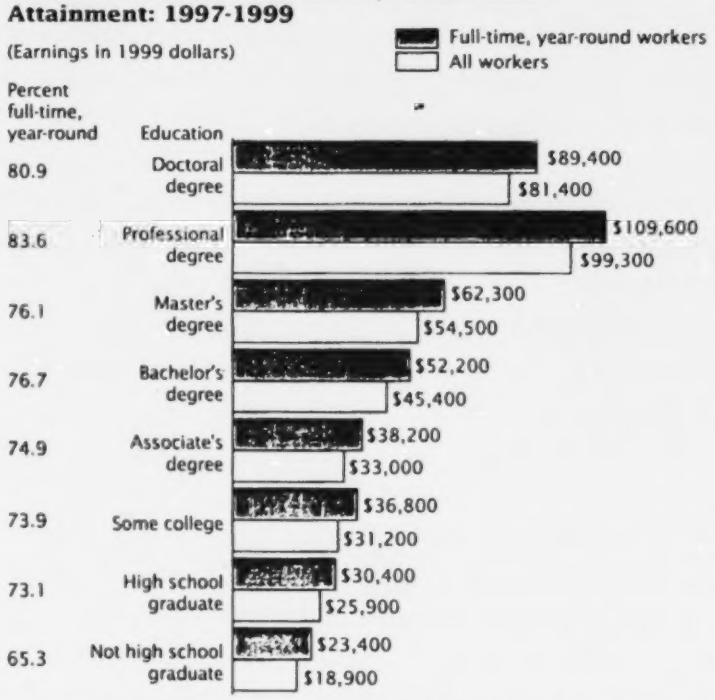
high school; 26 percent had a bachelor's degree or higher.[3] Both figures were all-time highs. In 1975, 63 percent of adults had a high school diploma, and 14 percent had obtained a bachelor's degree.[4] Much of the increase in educational attainment levels of the adult population is due to a more educated younger population replacing an older, less educated population. As more and more people continue their schooling, this more highly-educated population pursues opportunities to enter into occupations yielding higher returns in earnings.

Earnings increase with educational level.

Adults ages 25 to 64 who worked at any time during the study period[5] earned an average of $34,700 per year.[6] Average earnings ranged from $18,900 for high school dropouts to $25,900 for high school graduates, $45,400 for college graduates, and $99,300 for workers with professional degrees (M.D., J.D., D.D.S., or D.V.M.). As shown in Figure 1, with the exception of workers with professional degrees who have the highest average earnings, each successively higher education level is associated with an increase in earnings.

Figure 1.
Work Experience and Average Annual Earnings of Workers 25 to 64 Years Old by Educational Attainment: 1997-1999

(Earnings in 1999 dollars)



Source: U.S. Census Bureau, Current Population Surveys, March 1998, 1999, and 2000.

Work experience also influences earnings. Average earnings for people who worked full-time, year-round were somewhat higher than average earnings for all workers (which include people who work part-time or for part of the year). Most workers worked full-time and year-round (74 percent). However, the commitment to work full-time, year-round varies with demographic factors, such as educational attainment, sex, and age. For instance, high school dropouts (65 percent) are less likely than people with bachelor's degrees (77 percent) to work full-time and year-round. Historically, women's attachment to the labor force has been more irregular than men's due mostly to competing family responsibilities.[7] Earnings estimates based on all workers (which includes part-time workers) include some of this variability. Yet, regardless of work experience, the education advantage remains.

Earnings estimates based on full-time, year-round workers provide a more straight-forward view of potential earnings and remove some biases for demographic group comparisons. The resulting

[3] For a further explanation about educational attainment, see Eric Newburger and Andrea Curry, *Educational Attainment in the United States: March 1999*, Current Population Reports, P20-528, U.S. Census Bureau, Washington, DC, 2000.

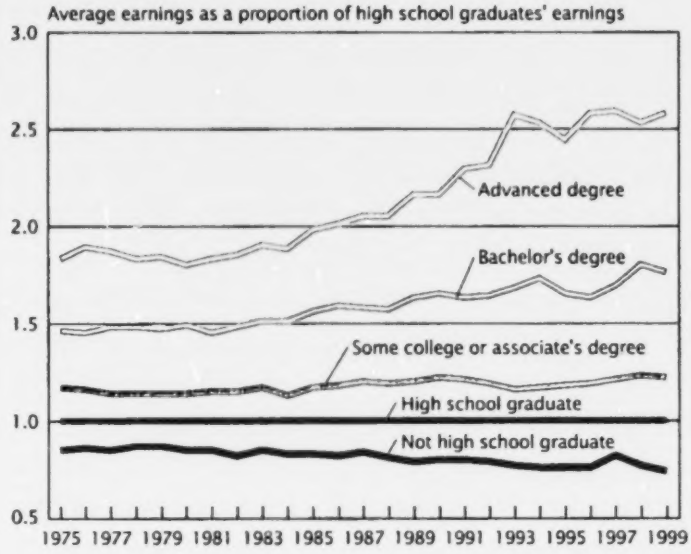
[4] Prior to 1992, educational attainment was measured using a two-part question referring to years of schooling "What is the highest grade or year of regular school ever attended?" and "Did you complete the grade?" Since 1992, a new question asks specific degree completion levels beyond high school. For a more detailed discussion of the question changes, see Robert Kominski and Andrea Adams, *Educational Attainment in the United States: March 1993 and 1992*, U.S. Bureau of the Census, Current Population Reports, P20-476, U.S. Government Printing Office, Washington, DC, 1994.

[5] The study period covers 3 years – 1997, 1998, and 1999. Earnings are represented in 1999 dollars.

[6] Though medians provide a measure of central tendency less sensitive to outliers, and so are often used in describing earnings data, means present fewer computational difficulties, both in modeling the synthetic work-life estimates and in creating statistical procedures to test these estimates.

[7] See Suzanne M. Bianchi and Daphne Spain. *American Women in Transition*. Russell Sage Foundation, New York, 1986. pp. 139-168.

Figure 2.
Average Earnings of Full-Time, Year-Round Workers as a Proportion of the Average Earnings of High School Graduates by Educational Attainment: 1975 to 1999



Source: U.S. Census Bureau, Current Population Surveys, March 1976-2000.

synthetic work-life estimates assume full employment throughout one's work-life. These estimates cannot account for an individual's past partial employment or unemployment, which may reduce current full-time earnings.[8] The text of this report discusses earnings for full-time, year-round workers only, though findings for all workers are shown in the tables.

Historically, education has paid off.

Over the past 25 years, earnings differences have grown among workers with different levels of educational attainment. As Figure 2 shows, in 1975, full-time, year-round workers with a bachelor's degree had 1.5 times the annual earnings of workers with only a high school diploma.[9] By 1999, this ratio had risen to 1.8. Workers with an advanced degree, who earned 1.8 times the earnings of high school graduates in 1975, averaged 2.6 times the earnings of workers with a high school diploma in 1999. During the same period, the relative earnings of the least educated workers fell. While in 1975, full-time, year-round workers without a high school diploma earned 0.9 times the earnings of workers with a high school diploma; by 1999, they were earning only 0.7 times the average earnings of high school graduates.

The historical change in relative earnings by educational attainment may be explained by both the supply of labor and the demand for skilled workers. In the 1970s, the premiums paid to college graduates dropped because of an increase in their numbers, which kept the relative earnings range among the educational attainment levels rather narrow. Recently, however, technological changes favoring more skilled (and educated) workers have tended to increase earnings among working adults with higher educational attainment, while, simultaneously, the decline of labor unions and a decline in the minimum wage in constant dollars have contributed to a relative drop in the wages of less educated workers.[10]

SYNTHETIC EARNINGS

Earnings differences by educational attainment compound over one's lifetime.

Synthetic estimates of work-life earnings dramatically illustrate the differences that develop between workers of different educational levels over the course of their working lives.

As shown in Figure 3, for full-time, year-round workers, the 40-year synthetic earnings estimates are about $1.0 million (in 1999 dollars) for high school dropouts, while completing high school would increase earnings by anoth-

[8] The annual earnings and work-life earnings for a specific individual may differ significantly from the group averages presented in this report. Some factors, which can help explain the differences, include the individual's work history and continuity, occupation, type and quality of education and field of training (college major), motivation, and location. For further discussion on field of training and earnings, see Bauman, Kurt and Camille Ryan, *What's It Worth? Field of Training and Economic Status: 1996*, Current Population Reports, P70-72, U.S. Census Bureau, Washington DC, 2001.

[9] Data in Figure 2 are based on full-time, year-round workers 18 years old and over.

[10] Boesel, David, *College for All? Is There Too Much Emphasis on Getting a 4-year College Degree?* National Library of Education Department of Education NLE 1999-2024, 1999.

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er quarter-million dollars (to $1.2 million). People who attended some college (but did not earn a degree) might expect work-life earnings of about $1.5 million, and slightly more for people with associates degrees ($1.6 million). Over a work-life, individuals who have a bachelor's degree would earn on average $2.1 million — about one-third more than workers who did not finish college, and nearly twice as much as workers with only a high school diploma. A master's degree holder tops a bachelor's degree holder at $2.5 million. Doctoral ($3.4 million) and professional degree holders ($4.4 million) do even better.

The large differences in average work-life earnings among the educational levels reflect both differential starting salaries and also disparate earnings trajectories — that is, the path of earnings over one's life. As Figure 4 shows, the earnings paths of people with doctoral and professional degrees look very different from those of workers at other levels of education. At most ages, however, more education equates to higher earnings.[11] Indeed, the educational payoff is most notable at the highest educational levels.

Figure 3.
Synthetic Work-Life Earnings Estimates for Full-Time, Year-Round Workers by Educational Attainment Based on 1997-1999 Work Experience

(In millions of 1999 dollars)

Source: U.S. Census Bureau, Current Population Surveys, March 1998, 1999, and 2000.

SEX, EDUCATION, AND EARNINGS

The educational gap between men and women is narrowing.

Among people ages 25 and older, the percentage of men and women with a bachelor's degree has increased sharply over the past 25 years, with women markedly narrowing the gap. In 1975, 18 percent of men and 11 percent of women had attained a bachelor's degree. By 2000, 28 percent of men and 24 percent of women had a bachelor's degree. In fact, in each year since 1982, more American women than men have received bachelor's degrees.[12] Additionally, 84 percent of both men and women had completed high school in 2000, up from 63 percent for men and 62 percent for women in 1975.

Men earn more than women at each education level.

Men had higher average earnings than women with similar educational attainment. Among full-time, year-round workers ages 25 to 64, the female-to-male earnings ratio was 0.67 during the study period.[13] This wage gap occurred with very little variation at every level of educational attainment.

Across the ages, however, the female-to-male earnings ratio was higher among younger full-time, year-round workers (0.84) than among older workers (0.56). Clearly, younger women begin their work-life with earnings much closer to those realized by men.[14] This pattern of male and female younger workers starting with closer earnings than those of older

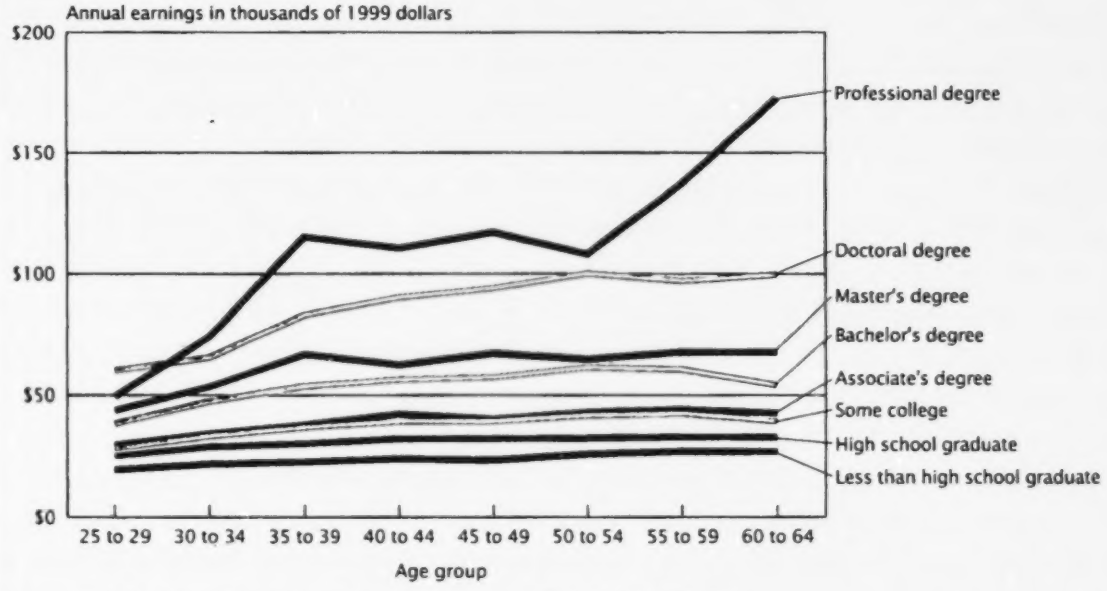
[11] With the exception of workers with professional degrees who have the highest average earnings. At some ages, average earnings for people with some college and for people with an associates degree are not significantly different.

[12] See National Center for Education Statistics, *Digest of Education Statistics 1999*, U.S. Department of Education, NCES2000-031, Table 249.

[13] Among all workers, including part-time workers, the female-to-male earnings ratio was 0.57. This greater difference reflects a higher proportion of part-time or seasonal workers among women.

[14] Some of the persistent, though shrinking, differences in earnings may be related to field of study. Women have historically tended to major in fields with lower economic rewards than have men. While this remains the case, a growing proportion of female college graduates now receive bachelor's degrees in more highly paid fields, such as business or computers (National Center for Education Statistics, "1999 Digest of Education Statistics," U.S. Department of Education, NCES 2000-031).

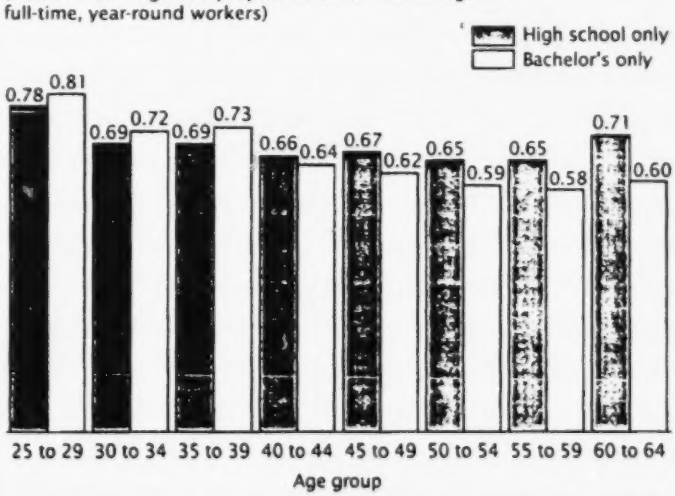
Figure 4.
Earnings Trajectories for Full-Time, Year-Round Workers by Educational Attainment Based on 1997-1999 Work Experience



Source: U.S. Census Bureau, Current Population Surveys, March 1998, 1999, and 2000.

Figure 5.
Women's Earnings Relative to Men's by Age and Educational Attainment: 1997-1999

(Women's earnings as a proportion of men's earnings for full-time, year-round workers)



Source: U.S. Census Bureau, Current Population Surveys, March 1998, 1999, and 2000.

workers is not new. In 1975, the earnings ratio was 0.69 for younger workers compared with 0.56 for older workers. The age differences remain, although the earnings gap between younger men and women is closing.

Figure 5 illustrates the variation in female-to-male earnings ratios by age and education level for the 1997-1999 study period. At both the high school and bachelor's attainment level, the earnings of younger women and men are relatively close with women earning about four-fifths of men's earnings. However, for workers with a bachelor's attainment, the earnings difference between men and women becomes more pronounced as workers age (from 0.81 for ages 25 to 29 years compared with 0.60 for ages 60 to 64), compared with

a relatively flat earnings difference for workers at the high school level.[15]

Numerous events over one's work-life may account for the expanding wage gap with age, such as continuous participation in the labor force, commitment to career goals, competing events, discrimination, and promotions. These and other factors may lower the earnings of women relative to men, and these differences play out dramatically with total work-life earnings.

The gap between men's and women's work-life earnings is substantial.

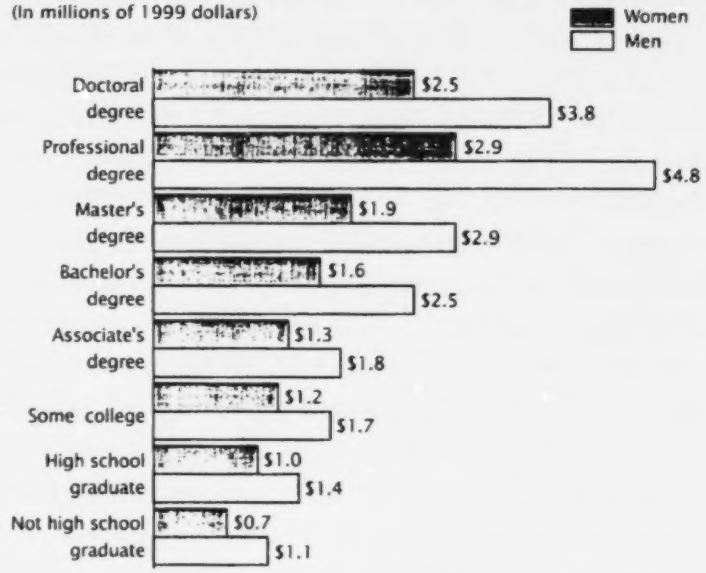
On average, a man with a high school education will earn about $1.4 million from ages 25 to 64 years. This compares with about $2.5 million for men completing a bachelor's degree and $4.8 million for men with a professional degree. In contrast, men with less than a high school education will earn an average of $1.1 million (Figure 6).

Women completing high school will earn an average of $1.0 million, about 40 percent less than the estimated $1.6 million for women completing a bachelor's degree. The work-life payoffs for women with professional ($2.9 million) and doctoral ($2.5 million) degrees, though substantial, lag markedly behind those of men with the same educational attainment.

The cumulated difference between men and women amounts to about $350,000 for high school dropouts. The difference increases to $450,000 for high school graduates and to about twice that for bachelor's degree holders. Men with professional degrees may expect to earn almost $2 million more than their female counterparts over their work-life.

Figure 6.
Synthetic Work-Life Earnings Estimates for Full-Time, Year-Round Workers by Sex and Educational Attainment Based on 1997-1999 Work Experience

(In millions of 1999 dollars)



Source: U.S. Census Bureau, Current Population Surveys, March 1998, 1999, and 2000.

RACE AND HISPANIC ORIGIN, EDUCATION, AND EARNINGS

Educational attainment and work-life earnings vary by race and Hispanic origin.

Educational attainment differs significantly by race and Hispanic origin. Among adults 25 years old and over in 2000, 88 percent of White non-Hispanics, 86 percent of Asians and Pacific Islanders, and 79 percent of Blacks had attained at least a high school diploma.[16] Similarly, 28 percent of White non-Hispanics, 44 percent of Asians and Pacific Islanders, and 17 percent of Blacks had received a Bachelor's degree. For Hispanics (who may be of any race), only 57 percent had a high school diploma and 11 percent a bachelor's degree. Even accounting for these large differences in

[15] The female-to-male earnings ratio for workers ages 60-64 with a high school diploma does not differ significantly from the ratio for younger workers, ages 25-29.

[16] Because Hispanics may be of any race, data in this report for Hispanics overlap slightly with data for the Black population and for the Asian and Pacific Islander population. Based on the March 1998, 1999, and 2000 Current Population Survey samples, 3 percent of Black adults 25 to 64 years old and 2 percent of Asian and Pacific Islanders 25 to 64 years old are also of Hispanic origin. Data for the American Indian and Alaska Native population are not shown in this report because of their small sample size in the March 1998, 1999, and 2000 Current Population Surveys.

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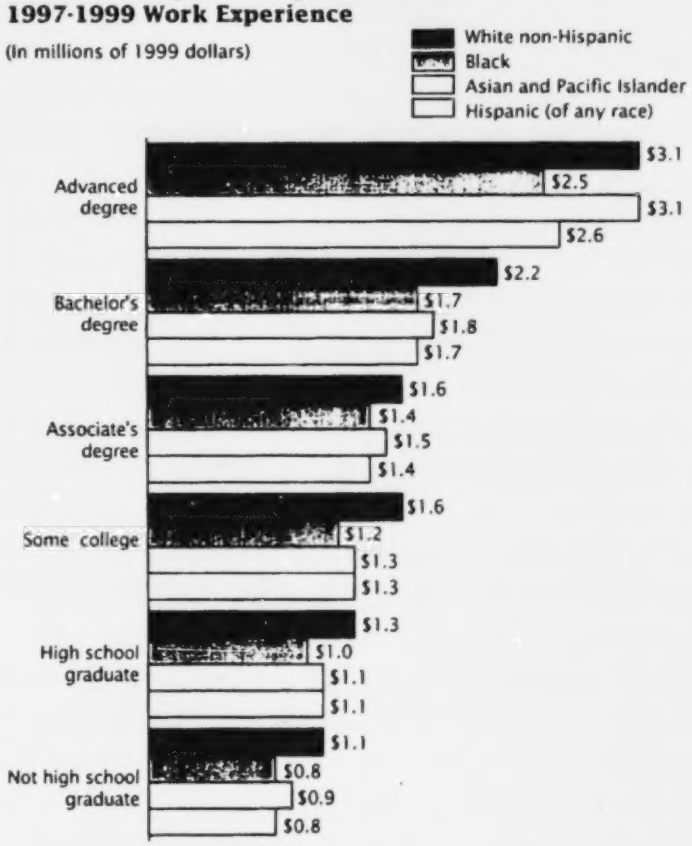
Figure 7.

Synthetic Work-Life Earnings Estimates for Full-Time, Year-Round Workers by Educational Attainment, Race, and Hispanic Origin Based on 1997-1999 Work Experience

(In millions of 1999 dollars)



Source: U.S. Census Bureau, Current Population Surveys, March 1998, 1999, and 2000.

educational attainment by looking at earnings within each education category, earnings differences persist and can accumulate dramatically over a 40-year work-life.[17]

White non-Hispanics earn more than Blacks or Hispanics at almost every level of educational attainment.[18] For example, among full-time, year-round workers with a high school education, White non-Hispanics will earn an average of $1.3 million during their working life, compared with about $1.1 million earned by Blacks and Hispanics (Figure 7). At the bachelor's level, White non-Hispanics can expect total earnings of about $2.2 million, compared with $1.7 million for Blacks or Hispanics.

While Asians and Pacific Islanders earn less than White non-Hispanics with similar educational attainment at the high school graduate level and the bachelor's level, Asians and Pacific Islanders with graduate degrees (master's, doctoral, or professional) have earnings similar to those of White non-Hispanics. Among full-time, year-round workers with a high school diploma or bachelor's degree, Asians and Pacific Islanders will earn about $200,000 and $400,000 less, respectively, than White non-Hispanics during their work-life.

Though on average, work-life earnings are lower for Blacks and Hispanics than White non-Hispanics of the same educational attainment level, the educational investment still pays off. Black workers with less than a high school education would earn less than a million dollars during their work-life, increasing to $1.0 million for workers with a high school education, $1.7 for a bachelor's degree, and $2.5 million for an advanced degree. Likewise, Hispanic work-life earnings also reflect this ascending outcome. Thus, regardless of race or ethnicity, higher educational attainment equates to higher earnings.

The economic reward for each succeeding level of educational attainment differs by group. Though the work-life earnings differences between a high school dropout and a high school graduate are fairly uniform for the three race groups and Hispanics, about $200,000 each, work-life earnings for workers with a bachelor's degree compared

[17] The small sample size of workers by race and ethnicity prevents this report from providing some kinds of detailed analysis by race or ethnicity for some education levels. However, summary statistics are possible, and these have been included.

[18] With the exception of workers with an associates degree where the work-life earnings estimates for Hispanics do not differ significantly than those for White non-Hispanics.

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with workers with just a high school diploma increased by about $1,000,000 for White non-Hispanics and about $700,000 for Asians and Pacific Islanders, Blacks, and Hispanics. More dramatic differences appear between the work-life earnings for people with advanced degrees and bachelor's degrees. Continuing college beyond the bachelor's level pays an extra $800,000 for White non-Hispanics and Blacks compared with $1.3 million for Asians and Pacific Islanders.[19]

METHODOLOGY

Assumptions and limitations

An individual's work-life earnings are the sum of each year's earnings over that person's work-life. In this report, "synthetic" estimates of work-life earnings were created by using the working population's 1-year annual earnings and summing age-specific average earnings for people ages 25 and 64 years. The resulting totals represent what individuals with the same educational level would expect to earn on average in 1999 dollars, in a hypothetical 40-year working life.

The work-life earnings estimates in this report depend upon several assumptions. First, the estimates assume current cross-sectional earnings are representative of the patterns in future earnings. Second, the average earnings of individuals in each age group have been based on all members within an age group without regard to work history, past performance, or other factors which may affect pay. Third, these estimates do not account for any future productivity gains in the economy, and therefore, the estimates may be low. Fourth, this report assumes uninterrupted labor force participation from age 25 to 64. Since earnings are based on currently surviving workers and past research indicates differential mortality by education, the work-life estimates may be inflated differentially by education level.

The limitations in the CPS universe also affect earnings estimates. Selecting only the resident, noninstitutional population with earnings excludes a segment of adults with less education. This results in a higher estimate of the earnings of people with less education, and consequently, may understate the difference in work-life earnings between workers with less education and workers with more.

Many factors which affect earnings are not covered in this report. These include college major, continuity of occupation (or "career path"), or the motivation and effort put in at work by the individual. Information on other characteristics known to affect earnings is available from the Current Population Survey, but the limited sample size of these data preclude their use in this analysis. Occupation, marital status, family responsibilities or income requirements, area of residence, local job availability, and employment rates fall into this category. In addition, non-cash or fringe benefits data are not considered in the average earnings estimates.

Computational procedure

The following equation describes the estimates,

work-life earnings =

$$\sum_{x=25}^{x=64} \text{average(earnings)}_{\text{age (x)}}$$

where work-life earnings equals the sum of all the average earnings of workers of each age from 25 to 64 years old.

One of the difficulties in producing reasonable work-life estimates is the reliability of the available data. For many groups, the limited sample size of the Current Population Survey made earnings averages for members of certain sub-population groups unreliable. To account for limited sample size, two steps were taken in developing the estimates.

First, 3 years of sample data from the March 1998, 1999, and 2000 CPS were consolidated into a single data set for analysis.[20] All earnings data were adjusted to reflect 1999 dollars using the Consumer Price Index.[21]

Second, average earnings were generated on consolidated age groups rather than single years of age. For the total population of workers, and workers grouped by sex, averages were generated for 5-year age groups, summed, and multiplied by 5. For workers grouped by race or ethnic origin, 10-year groups were used to generate averages, which were then summed and multiplied by 10. Limiting the sample to full-time, year-round workers had little impact on sample sizes by characteristic and so was not considered when choosing age groups.

For example, earnings of Blacks were calculated using 10-year age

[19] For Hispanics, the estimated difference of $900,000 between the average work-life earnings of workers with bachelor's degrees and workers with advanced degrees is not significantly different from those for White non-Hispanics, Blacks, or Asians and Pacific Islanders.

[20] The CPS March Supplement asks respondents to report earnings from the previous calendar year. Therefore, March 1998, 1999, and 2000 CPS include data on 1997, 1998, and 1999 earnings. Because a proportion of households are re-sampled and thus appear in 2 years of data, a correlation coefficient which accounts for the resulting covariation is used in the calculation of standard errors, confidence intervals, and statistical tests of significance.

[21] "CPI for All Urban Consumers, U.S. City Average for All Items," as published by the U.S. Department of Labor, Bureau of Labor Statistics, series ID# CUUR0000SA0.

groups. The estimation model thus took the following form.

Work-life earnings = 10*(Average earnings of Black workers ages 25 to 34 years) + 10*(Average earnings of Black workers ages 35 to 44 years) + 10*(Average earnings of Black workers ages 45 to 54 years) + 10*(Average earnings of Black workers ages 55 to 64 years).

SOURCE OF THE DATA

Most estimates in this report come from data obtained in March 1998, 1999, and 2000 from the Current Population Survey (CPS). Some estimates are based on data obtained from the CPS in earlier years. The U.S. Census Bureau conducts the survey every month, although this report uses only March data for its estimates.

ACCURACY AND RELIABILITY OF THE DATA

Statistics from sample surveys are subject to sampling and nonsampling error. All comparisons presented in this report have taken sampling error into account and meet the Census Bureau's standards for statistical significance. Nonsampling errors in surveys may be attributed to a variety of sources, such as how the survey was designed, how respondents interpret questions, how able and willing respondents are to provide correct answers, and how accurately answers are coded and classified. The Census Bureau employs quality control procedures throughout the production process — including the overall design of surveys, testing the wording of questions, review of the work of interviewers and coders, and statistical review of reports.

The CPS employs ratio estimation, whereby sample estimates are adjusted to independent estimates of the national population by age, race, sex, and Hispanic origin. This weighting partially corrects for bias due to undercoverage, but how it affects different variables in the survey is not precisely known. Moreover, biases may also be present when people who are missed in the survey differ from those interviewed in ways other than the categories used in weighting (age, race, sex, and Hispanic origin). All of these considerations affect comparisons across different surveys or data sources. Please contact Brandi York of the Demographic Statistical Methods Division via Internet e-mail at *dsmd_s&a@census.gov* for information on the source of the data, the accuracy of the estimates, the use of standard errors, and the computation of standard errors.

MORE INFORMATION

The electronic version of this report is available on the Internet at the Census Bureau's World Wide Web site (*www.census.gov*). Once on the site, click on "E" under the "Subjects A-Z" heading, and then "Educational Attainment."

CONTACTS

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USER COMMENTS

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Chief, Population Division
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or send e-mail to: *pop@census.gov*

Table 1.
Synthetic Estimates of Work-Life Earnings by Educational Attainment, Work Experience, and Age, Based on 1997-1999 Work Experience

(Numbers in 1999 dollars)

Work experience and age	Not high school graduate	High school graduate	Some college	Associate's degree	Bachelor's degree	Master's degree	Professional degree	Doctoral degree
ALL WORKERS								
Work-life estimate	**766,951**	**1,037,759**	**1,267,803**	**1,331,201**	**1,838,432**	**2,127,947**	**4,015,613**	**3,105,793**
90-percent confidence interval (±)[1]	18,998	11,594	22,553	36,334	29,007	52,134	218,750	161,514
Average earnings								
Total	18,894	25,909	31,192	33,020	45,394	54,537	99,253	81,430
25 to 29 years	15,346	20,975	22,871	25,403	33,031	37,211	42,662	47,457
30 to 34 years	17,238	24,282	28,164	29,642	41,417	47,080	65,355	61,159
35 to 39 years	18,311	25,633	30,747	32,347	46,532	58,179	104,366	79,221
40 to 44 years	19,426	27,696	33,663	36,143	49,724	55,577	102,191	82,947
45 to 49 years	19,230	27,936	34,487	35,784	50,322	59,379	109,435	87,146
50 to 54 years	21,514	27,942	36,725	37,671	54,419	58,897	98,787	88,590
55 to 59 years	21,716	27,643	35,838	37,827	50,981	58,848	127,745	89,769
60 to 64 years	20,610	25,446	31,096	31,423	41,259	50,423	152,581	84,870
FULL-TIME, YEAR-ROUND WORKERS								
Work-life estimate	**950,097**	**1,226,575**	**1,494,989**	**1,563,702**	**2,140,864**	**2,463,059**	**4,411,542**	**3,440,001**
90-percent confidence interval (±)[1]	25,797	14,583	29,240	46,903	35,559	69,948	249,680	198,575
Average earnings								
Total	23,420	30,436	36,758	38,216	52,231	62,295	109,551	89,433
25 to 29 years	19,280	24,977	28,186	29,349	38,118	43,614	49,162	60,023
30 to 34 years	21,599	28,754	33,068	33,977	47,356	53,240	73,775	65,339
35 to 39 years	22,480	29,998	36,616	37,631	53,519	66,606	114,998	82,763
40 to 44 years	23,800	31,968	38,970	42,147	56,226	62,361	110,316	89,948
45 to 49 years	23,259	32,043	39,134	40,032	57,281	66,971	116,835	93,800
50 to 54 years	25,780	32,223	41,564	42,913	61,324	64,605	107,726	99,821
55 to 59 years	26,918	32,781	42,380	44,083	60,437	67,622	137,035	96,873
60 to 64 years	26,904	32,570	39,080	42,609	53,911	67,592	172,461	99,434

[1] This figure added to or subtracted from the estimate provides the 90-percent confidence interval.

Note: Average earnings based on means.

Source: U.S. Census Bureau, Current Population Surveys, March 1998, 1999, and 2000.

Table 2.
Synthetic Estimates of Work-Life Earnings by Educational Attainment, Sex, Work Experience, and Age, Based on 1997-1999 Work Experience

(Numbers in 1999 dollars)

Sex, work experience, and age	Not high school graduate	High school graduate	Some college	Associate's degree	Bachelor's degree	Master's degree	Professional degree	Doctoral degree
MEN								
ALL WORKERS								
Work-life estimate	**926,740**	**1,292,447**	**1,587,208**	**1,642,398**	**2,294,747**	**2,601,549**	**4,488,976**	**3,491,928**
90-percent confidence interval (±)[1]	24,105	18,051	40,371	64,810	46,514	89,521	259,028	224,184
Average earnings								
Total	22,636	32,024	39,031	40,608	56,779	67,202	115,931	91,982
25 to 29 years	17,466	24,787	27,728	30,524	37,373	43,425	46,139	59,569
30 to 34 years	20,485	29,633	34,903	36,727	50,398	55,411	73,934	62,671
35 to 39 years	21,949	31,519	38,662	40,486	57,209	71,665	112,992	87,781
40 to 44 years	23,276	34,895	42,308	45,080	63,469	67,962	114,977	93,645
45 to 49 years	23,385	35,120	42,031	43,725	64,742	75,312	129,413	97,445
50 to 54 years	26,935	36,051	46,955	42,903	69,256	70,851	110,193	102,771
55 to 59 years	26,724	35,349	47,297	50,212	65,567	73,197	145,157	101,575
60 to 64 years	25,129	31,135	37,558	38,823	50,936	62,487	164,990	92,928
FULL-TIME, YEAR-ROUND WORKERS								
Work-life estimate	**1,069,100**	**1,419,932**	**1,740,929**	**1,793,213**	**2,468,324**	**2,889,977**	**4,784,121**	**3,751,483**
90-percent confidence interval (±)[1]	30,256	20,548	48,843	75,020	51,910	115,802	288,155	265,390
Average earnings								
Total	26,124	34,906	42,525	43,680	60,592	73,210	122,892	97,626
25 to 29 years	20,443	27,177	31,817	32,847	41,826	50,239	53,087	70,304
30 to 34 years	23,201	32,274	37,088	39,072	53,591	59,990	79,690	66,072
35 to 39 years	24,944	34,064	41,943	43,218	59,871	75,444	119,478	88,346
40 to 44 years	27,198	37,255	45,287	48,624	65,493	71,728	118,788	96,351
45 to 49 years	26,835	37,670	44,422	45,976	67,931	81,699	132,042	102,118
50 to 54 years	30,398	39,032	50,015	45,935	72,178	74,460	116,590	112,929
55 to 59 years	30,446	39,120	52,552	53,723	71,353	80,641	153,001	107,021
60 to 64 years	30,356	37,393	45,062	49,247	61,422	83,793	184,147	107,155
WOMEN								
ALL WORKERS								
Work-life estimate	**532,755**	**768,866**	**934,413**	**1,050,157**	**1,299,158**	**1,617,840**	**2,466,479**	**2,158,779**
90-percent confidence interval (±)[1]	31,157	12,966	15,452	33,771	23,436	36,747	190,229	159,680
Average earnings								
Total	13,217	19,156	23,015	26,104	32,816	41,270	63,904	56,807
25 to 29 years	11,140	15,974	18,113	20,846	28,901	32,662	39,565	33,773
30 to 34 years	12,029	17,230	21,009	23,322	32,146	38,833	55,472	57,564
35 to 39 years	12,631	18,442	22,591	25,414	34,989	42,720	87,603	61,390
40 to 44 years	13,764	19,697	24,617	28,205	34,608	42,856	76,751	60,520
45 to 49 years	13,804	20,957	26,052	27,770	34,383	44,028	61,964	64,586
50 to 54 years	13,987	21,130	26,022	32,643	34,969	45,265	63,103	56,037
55 to 64 years[2]	14,598	20,172	24,239	25,916	29,918	38,600	54,419	48,943
FULL-TIME, YEAR-ROUND WORKERS								
Work-life estimate	**722,048**	**968,305**	**1,172,547**	**1,290,600**	**1,612,193**	**1,892,375**	**2,878,016**	**2,482,647**
90-percent confidence interval (±)[1]	48,286	18,387	19,626	46,422	28,588	42,183	234,831	183,138
Average earnings								
Total	17,947	24,109	29,072	31,784	40,001	47,980	74,897	65,900
25 to 29 years	15,345	21,124	23,615	25,485	34,073	38,198	45,420	43,955
30 to 34 years	17,755	22,381	27,354	28,223	38,802	44,718	65,436	62,984
35 to 39 years	17,411	23,466	29,116	31,011	43,580	52,125	104,303	69,285
40 to 44 years	17,692	24,424	30,571	34,439	42,018	50,150	89,123	69,922
45 to 49 years	17,473	25,283	31,794	32,588	41,786	49,800	70,299	74,259
50 to 54 years	17,870	25,235	30,919	39,282	42,257	50,303	73,886	65,233
55 to 64 years[2]	20,432	25,874	30,566	33,546	39,961	46,591	63,568	55,446

[1]This figure added to or subtracted from the estimate provides the 90-percent confidence interval.
[2]The estimates for women's earnings ages 55 to 59 and 60 to 64 are combined into one group (55 to 64) due to small sample sizes.

Note: Average earnings based on means.

Source: U.S. Census Bureau, Current Population Surveys, March 1998, 1999, and 2000.

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Table 3.
Synthetic Estimates of Work-Life Earnings by Educational Attainment, Race, Hispanic Origin, Work Experience, and Age, Based on 1997-1999 Work Experience

(Numbers in 1999 dollars)

Race, Hispanic origin, work experience, and age	Not high school graduate	High school graduate	Some college	Associate's degree	Bachelor's degree	Advanced degree[1]
WHITE						
ALL WORKERS						
Work-life estimate	**794,696**	**1,070,692**	**1,303,356**	**1,359,195**	**1,902,033**	**2,663,080**
90-percent confidence interval (±)[2]	23,043	12,856	25,584	42,621	33,219	62,097
Average earnings						
Total	19,490	26,721	32,170	33,685	46,673	67,590
25 to 34 years	16,941	23,469	25,960	27,990	37,789	47,158
35 to 44 years	19,264	27,575	33,313	35,109	49,596	70,344
45 to 54 years	20,800	28,582	36,304	37,065	53,773	71,996
55 to 64 years	22,464	27,442	34,758	35,756	49,047	76,810
FULL-TIME, YEAR-ROUND WORKERS						
Work-life estimate	**981,413**	**1,262,800**	**1,546,346**	**1,594,036**	**2,222,668**	**3,055,360**
90-percent confidence interval (±)[2]	31,380	15,795	33,356	54,725	41,171	77,286
Average earnings						
Total	24,048	31,360	38,158	39,068	53,893	77,037
25 to 34 years	20,839	27,700	31,653	32,404	43,414	54,208
35 to 44 years	23,590	32,016	39,419	40,942	57,002	78,870
45 to 54 years	25,158	33,026	41,336	41,751	61,162	80,418
55 to 64 years	28,554	33,539	42,227	44,307	60,689	92,040
WHITE NON-HISPANIC						
ALL WORKERS						
Work-life estimate	**861,789**	**1,085,475**	**1,320,419**	**1,367,156**	**1,920,741**	**2,672,810**
90-percent confidence interval (±)[2]	28,914	13,545	27,112	43,620	34,335	63,261
Average earnings						
Total	21,482	27,182	32,744	34,014	47,205	67,940
25 to 34 years	17,955	24,003	26,317	28,062	38,148	47,218
35 to 44 years	20,800	27,998	33,929	35,613	50,277	70,543
45 to 54 years	23,282	28,873	36,617	37,239	54,234	72,311
55 to 64 years	24,141	27,673	35,178	35,802	49,415	77,209
FULL-TIME, YEAR-ROUND WORKERS						
Work-life estimate	**1,083,470**	**1,283,375**	**1,570,914**	**1,605,456**	**2,248,054**	**3,068,170**
90-percent confidence interval (±)[2]	40,045	16,782	35,493	55,765	42,677	78,833
Average earnings						
Total	27,086	31,969	38,925	39,507	54,562	77,475
25 to 34 years	23,770	28,457	32,298	32,624	43,772	54,285
35 to 44 years	26,145	32,537	40,219	41,565	57,906	79,194
45 to 54 years	27,862	33,383	41,729	41,950	61,790	80,705
55 to 64 years	30,570	33,960	42,845	44,407	61,337	92,633
BLACK						
ALL WORKERS						
Work-life estimate	**638,225**	**878,833**	**1,099,573**	**1,196,247**	**1,492,568**	**2,343,370**
90-percent confidence interval (±)[2]	24,963	20,638	30,761	72,471	58,713	94,445
Average earnings						
Total	15,987	21,692	26,362	28,146	36,311	47,699
25 to 34 years	12,581	19,737	22,146	24,433	31,152	39,884
35 to 44 years	17,012	21,767	27,800	28,612	37,824	45,750
45 to 54 years	18,101	24,429	30,922	32,092	40,922	54,568
55 to 64 years	16,129	21,950	29,090	34,488	39,359	46,436

See footnotes at end of table.

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Table 3.
Synthetic Estimates of Work-Life Earnings by Educational Attainment, Race, Hispanic Origin, Work Experience, and Age, Based on 1997-1999 Work Experience—Con.

(Numbers in 1999 dollars)

Race, Hispanic origin, work experience, and age	Not high school graduate	High school graduate	Some college	Associate's degree	Bachelor's degree	Advanced degree[1]
BLACK—Con.						
FULL-TIME, YEAR-ROUND WORKERS						
Work-life estimate	**807,374**	**1,037,184**	**1,247,895**	**1,357,547**	**1,677,160**	**2,512,980**
90-percent confidence interval (±)[2]	29,182	24,185	32,445	79,197	64,579	105,428
Average earnings						
Total	20,362	25,655	30,194	32,077	40,251	51,154
25 to 34 years	17,622	24,273	26,323	27,769	35,136	43,927
35 to 44 years	21,416	25,453	31,253	33,127	41,115	48,769
45 to 54 years	21,253	27,365	33,950	35,695	44,261	57,700
55 to 64 years	20,447	26,627	33,264	39,164	47,204	49,748
ASIAN AND PACIFIC ISLANDER						
ALL WORKERS						
Work-life estimate	**719,975**	**901,614**	**1,135,016**	**1,351,452**	**1,565,197**	**2,798,480**
90-percent confidence interval (±)[2]	86,943	45,170	111,042	156,506	69,166	288,132
Average earnings						
Total	18,103	22,896	28,384	33,007	39,835	65,388
25 to 34 years	18,108	20,858	29,195	30,591	37,090	49,606
35 to 44 years	17,089	23,454	27,326	31,347	43,069	72,253
45 to 54 years	20,461	25,314	28,561	38,055	41,967	67,486
55 to 64 years	16,338	20,536	28,419	35,152	34,394	90,503
FULL-TIME, YEAR-ROUND WORKERS						
Work-life estimate	**875,305**	**1,056,329**	**1,309,136**	**1,482,595**	**1,801,288**	**3,104,930**
90-percent confidence interval (±)[2]	115,093	52,969	93,821	147,714	79,516	326,355
Average earnings						
Total	22,056	26,659	31,995	36,568	46,006	74,054
25 to 34 years	22,646	24,579	30,518	31,982	44,086	58,024
35 to 44 years	20,428	26,734	32,572	35,597	48,144	80,735
45 to 54 years	24,710	29,199	32,709	43,843	48,220	74,172
55 to 64 years	19,747	25,121	35,114	36,838	39,678	97,562
HISPANIC (OF ANY RACE)						
ALL WORKERS						
Work-life estimate	**678,454**	**925,113**	**1,093,791**	**1,237,869**	**1,505,666**	**2,322,410**
90-percent confidence interval (±)[2]	38,639	35,094	45,458	214,562	106,969	281,277
Average earnings						
Total	16,792	22,572	26,507	29,376	36,172	58,299
25 to 34 years	16,002	20,499	23,526	27,457	31,629	45,412
35 to 44 years	17,388	23,701	27,794	28,605	37,199	64,129
45 to 54 years	16,798	24,714	31,413	33,448	41,836	62,624
55 to 64 years	17,657	23,597	26,646	34,276	39,904	60,076
FULL-TIME, YEAR-ROUND WORKERS						
Work-life estimate	**822,590**	**1,064,984**	**1,264,431**	**1,440,018**	**1,700,896**	**2,614,220**
90-percent confidence interval (±)[2]	54,422	38,527	51,247	287,359	119,884	332,889
Average earnings						
Total	20,041	26,026	30,867	33,600	40,940	65,805
25 to 34 years	18,584	23,592	27,697	30,878	37,182	52,351
35 to 44 years	20,528	27,278	32,252	32,942	40,980	69,889
45 to 54 years	20,651	28,469	35,431	37,959	45,496	72,381
55 to 64 years	22,496	27,159	31,063	42,223	46,432	66,801

[1]Advanced degree includes master's, professional, or doctoral degrees.
[2]This figure added to or subtracted from the estimate provides the 90-percent confidence interval.

Note: Average earnings based on means.

Source: U.S. Census Bureau, Current Population Surveys, March 1998, 1999, and 2000.

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